

## AMENDMENTS

### Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application:

#### Listing of Claims:

1. (Currently amended) An isolated MHC Class I-restricted epitope peptide derived from survivin, comprising ~~the epitope peptide of SEQ ID NO: 5, wherein the epitope peptide has~~ a C<sub>50</sub> value, defined as the concentration of the peptide required for half-maximal binding to HLA-A2, which is at the most 20  $\mu$ M is capable of eliciting INF- $\gamma$  producing cells in a PBL population of a patient having cancer disease wherein survivin is expressed.

Claims 2-11. (Cancelled)

12. (Withdrawn) A peptide according to claim 1 comprising at the most 20 amino acid residues.

13. (Withdrawn) A peptide according to claim 12 that comprises at the most 10 amino acid residues.

Claims 14-17. (Cancelled)

18. (Withdrawn) A peptide according to any of the preceding claims, which is phosphorylated.

19. (Withdrawn) A peptide according to claim 18, which comprises Thr34 of the native survivin disclosed in US 6,45,23.

20. (Cancelled)

21. (Previously presented) A peptide according to claim 1 that is capable of eliciting INF- $\gamma$ -producing cells in a PBL population of a cancer patient at a frequency of at least 10 per  $10^4$  PBLs.

22. (Cancelled)

23. (Previously presented) A peptide according to claim 1 where the cancer disease is selected from the group consisting of a haematopoietic malignancy including chronic lymphatic leukemia and chronic myeloid leukemia, melanoma, breast cancer, lung cancer, colon cancer, pancreas cancer and prostate cancer.

24. (Original) A peptide according to claim 1, which is capable of eliciting INF- $\gamma$ -producing cells in a PBL population of a patient having a cancer disease, said INF- $\gamma$ -producing cells having cytotoxic effect against survivin expressing cells of a cancer cell line, including a cell line selected from the group consisting of the breast cancer cell line MCF-7 and the melanoma cell line FM3.

25. (Currently amended) An immunogenic pharmaceutical ~~pharmaceutical~~ composition comprising the peptide according to claim 1.

Claims 26-28. (Cancelled)

29. (Withdrawn) A composition according to claim 25, further comprising an immunogenic protein or peptide fragment selected from a protein or peptide fragment not belonging to or derived from the survivin protein family.

30. (Withdrawn) A composition according to claim 29, where the protein or peptide fragment not belonging to or derived from the survivin protein family is a protein, or peptide fragment hereof, involved in regulation of cell apoptosis.

31. (Withdrawn) A composition according to claim 29 where the immunogenic protein or peptide fragment selected from a protein or peptide fragment hereof not belonging to or derived from the survivin protein family is Bcl-2 or a peptide fragment hereof.

32. (Cancelled)

33. (Currently amended) An immunogenic composition according to claim 25, 28 ~~where the vaccine is~~ capable of eliciting an immune response against a cancer disease where survivin is expressed.

34. (Previously presented) A composition according to claim 33 where the cancer disease is selected from the group consisting of a haematopoietic malignancy including chronic lymphatic leukemia and chronic myeloid leukemia, melanoma, breast cancer, lung cancer, colon cancer, pancreas cancer and prostate cancer.

35. (Currently amended) An immunogenic composition according to claim 33 or 34 where the ~~vaccine~~ composition elicits the production in the ~~vaccinated~~ recipient subject of effector T-cells having a cytotoxic effect against the cancer cells.

36. (Previously presented) A composition for *ex vivo* or *in situ* detection of the presence in a cancer patient of survivin reactive T-cells among PBLs or in tumor tissue, the composition comprising a peptide according to claim 1.

37. (Cancelled)

38. (Previously presented) A complex of a peptide according to claim 1 and a Class I HLA molecule or a fragment of such molecule.

39. (Original) A complex according to claim 38 which is monomeric.

40. (Original) A complex according to claim 38 which is multimeric.

41. (Withdrawn) A method of detecting in a cancer patient the presence of survivin reactive T-cells, the method comprising contacting a tumour tissue or a blood sample with a complex according to claim 38 and detecting binding of the complex to the tissue or the blood cells.

42. (Withdrawn) A molecule that is capable of binding specifically to a peptide according to claims 1.

43. (Withdrawn) A molecule according to claim 36 which is an antibody or a fragment hereof.

44. (Withdrawn) A molecule that is capable of blocking the binding of a molecule according to claim 42 or 43.

45. (Withdrawn) A method of treating a cancer disease, the method comprising administering to a patient suffering from the disease an effective amount of the composition according to claim 25, a molecule according to claim 42 or a molecule according to claim 44.

46. (Withdrawn) A method according to claim 45 wherein the disease to be treated is a cancer disease where survivin is expressed.

47. (Withdrawn) A method according to claim 46 wherein the cancer disease is selected from the group consisting of a haematopoietic malignancy including chronic lymphatic

leukemia and chronic myeloid leukemia, melanoma, breast cancer, cervix cancer, ovary cancer, lung cancer, colon cancer, pancreas cancer and prostate cancer.

48. (Withdrawn) A method according to claim 45, which is combined with a further treatment.

49. (Withdrawn) A method according to claim 48 wherein the further treatment is radiotherapy or chemotherapy.

50. (Cancelled).